

## G Street Bridge (HST)

## **STRUCTURE CONCRETE**

5/29/2012

**G Street Bridge (HST)****STRUCTURE CONCRETE**

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
						BENTCAPS TOTAL
						48.8
<b>HINGES</b>						
<b>TOTAL SUPER CONCRETE</b>					CY	487.1

## G Street Bridge (HST)

## STRUCTURE CONCRETE

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)		
	LENGTH	WIDTH	THICK		AREA			
<b>SUBSTRUCTURE CONCRETE</b>								
<b>ABUTMENTS</b>								
ABUT 1								
backwall	70.07	3.50	1.00	1	3.50	9.08		
stem	70.07	14.27	3.50	1	49.96	129.64		
shear keys	1.50	1.50	2.50	2	3.75	0.42		
ABUT 3								
backwall	70.01	3.50	1.00	1	3.50	9.08		
stem	70.01	13.95	3.50	1	48.84	126.63		
shear keys	1.50	1.50	2.50	2	3.75	0.42		
Note: Lengths measured along skew					ABUTMENT TOTAL	275.3		
<b>WINGWALLS</b>								
Return Walls	7.00	17.61	1.13	4	19.81	20.55		
					WINGWALL TOTAL	20.5		
<b>COLUMNS PIERS</b>								
COLUMNS (basic)	19.25	2.50	2.50		6.2500			
COLUMNS (with aesthetics)	19.25	3.50	3.00	4.00	10.5000	29.94		
					COLUMNS TOTAL	29.9		
<b>NON FTG TOTAL CONCRETE</b>								
					CY	325.8		
<b>FOOTINGS</b>								
ABUT 1	70.07	13.50	1.67	1.00	22.50	58.40		
ABUT 3	70.01	13.50	1.67	1.00	22.50	58.34		
FOOTING KEY	70.04	2.00	1.00	2.00	2.00	10.38		
BENT 2	14.00	14.00	3.00	4.00	42.00	87.11		
<b>FOOTING TOTAL CONCRETE</b>								
					CY	214.2		
<b>RETAINING WALLS</b>								
AT ABUTMENT 1								
Retaining Wall Type 1 (H=10') - Left	57.68	8.42	1.08	1	9.12	19.49		
battered side	57.68	8.42	0.35	0.5	2.96	3.16		
Retaining Wall Type 1 (H=8') - Right	54.52	7.30	1.08	1	7.91	15.97		
battered side	54.52	7.30	0.30	0.5	2.22	2.24		
AT ABUTMENT 3								
Retaining Wall Type 1 (H=8') - Left	64.20	7.86	1.08	1	8.51	20.24		
battered side	64.20	7.86	0.33	0.5	2.58	3.06		
Retaining Wall Type 1 (H=8') - Right	50.00	7.17	1.08	1	7.77	14.39		
battered side	50.00	7.17	0.29	0.5	2.08	1.93		
Retaining Wall Type 1 (H=6') - Right	41.23	5.22	1.08	1	5.65	8.64		
battered side	41.23	5.22	0.22	0.5	1.14	0.87		
FOOTINGS								
Abut1 Retaining Wall Type 1 (H=10') - Left	57.68	7.58	1.33	1.00	10.11	21.59		
Key	57.68	1.33	0.67	1.00	0.89	1.90		
Abut1 Retaining Wall Type 1 (H=8') - Right	54.52	7.25	1.33	1.00	9.66	19.51		
Key	54.52	1.33	0.67	1.00	0.89	1.79		
Abut3 Retaining Wall Type 1 (H=8') - Left	64.20	7.25	1.33	1.00	9.66	22.98		
Key	64.20	1.33	0.67	1.00	0.89	2.11		
Abut3 Retaining Wall Type 1 (H=8') - Right	50.00	7.25	1.33	1.00	9.66	17.90		
Key	50.00	1.33	0.67	1.00	0.89	1.65		

## G Street Bridge (HST)

## STRUCTURE CONCRETE

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF) AREA	TOTAL (CY)	
	LENGTH	WIDTH	THICK				
Abut3 Retaining Wall Type 1 (H=6") - Right	41.23	7.00	1.33	1.00	9.33	14.25	
Key	41.23	1.33	0.67	1.00	0.89	1.36	
							RET WALL TOTAL
							195.0
<b>APPROACH SLAB</b>							
							APP SLAB TOTAL
<b>SLOPE PAVING</b>							
							SLOPE PAVING TOTAL
<b>SEAL COURSE CONCRETE</b>							
							SEAL COURSE TOTAL
<b>MINOR CONCRETE</b>							
							MINOR CONC. TOTAL

G Street Bridge (HST)

REINFORCING STEEL

5/29/2012

## **REINFORCING STEEL G Street Bridge (HST)**

G Street Bridge (HST)

## REINFORCING STEEL

## G Street Bridge (HST)

## REINFORCING STEEL

5/29/2012

ID #	BAR SIZE & DESCRIPTION	HOOK in	MAIN ft	HOOK in	QTY (ea)	SIZE #	LENG ft	TOTAL feet.	WEIGHT PER REBAR SIZE									
									#3	#4	#5	#6	#7	#8	#9	#10	#11	
<b>RIGHT SIDE (H = 8') - H=7.17' - L=50.0'</b>																		
63 #4	#4 @ 18-t bars				49.6667		7	4	49.7	348		232.2						
64 #5	#5 @ 18-s bars				49.6667		6	5	49.7	298		310.8						
65 #5	#5 @ 12				49.6667		6	5	49.7	298		310.8						
66 #5	#5 tot 4				49.6667		4	5	49.7	199		207.2						
67 #6	#6 @ 10 x 15'-e bars (note 5)				8.09863	79.852	11	6	15.0	165		247.8						
68 #6	#6 @ 9-c bars (top, to toe-splice)				8.253	38.584	67	6	11.5	768		1154.1						
69 #5	#5 @ 12				8.08863		51	5	8.1	412		430.2						
70 #6	#6 @ 9-d bars				5.5555		67	6	5.6	372		559.1						
71 #5	#5 @ 9				4.868		67	5	4.9	326		340.2						
72 #5	#5 @ 9				3		67	5	3.0	201		209.6						
73 #5	#5 @ 12				49.6667		8	5	49.7	397		414.4						
<b>RIGHT SIDE (H = 6') - H=5.22' - L=41.23'</b>																		
63 #4	#4 @ 18-t bars				40.8133		6	4	40.8	245		163.6						
64 #5	#5 @ 18-s bars				40.8133		4	5	40.8	163		170.3						
65 #5	#5 @ 12				45.8133		6	5	45.8	275		286.7						
66 #5	#5 tot 4				45.8133		4	5	45.8	183		191.1						
67 #6	#6 @ 10 x 15'-e bars (note 5)				6.14163	103.3	11	6	15.0	165		247.8						
68 #6	#6 @ 9-c bars (top, to toe-splice)				6.303	37.612	55	6	9.4	519		779.6						
69 #5	#5 @ 12				6.13663		42	5	6.1	258		268.8						
70 #5	#5 @ 9-d bars				5.0225		55	5	5.0	276		288.1						
71 #5	#5 @ 9				4.699		55	5	4.7	258		269.6						
72 #5	#5 @ 9				3		55	5	3.0	165		172.1						
73 #5	#5 @ 12				45.8133		8	5	45.8	367		382.3						
										RETAINING WALL TOTAL (LB) = 24287								
										1214.8 12635.5 10437.0								
<b>SUMMARY</b>																		
										SIZE #3 #4 #5 #6 #7 #8 #9 #10 #11 #12 #13 #14 #15 #16 #17 #18								
										LB/FT 0.376 0.668 1.043 1.502 2.044 2.670 3.400 4.303 5.313 7.650 13.600								
<b>TOTAL WEIGHT (LB) = 186937</b>										383 26952 36398 59627 7029 17638 12494 25434 326								

NOTES:

ALWAYS TYPE 0 (ZERO) FOR NO INPUT. (TO AVOID ERROR MESSAGE)

TOTALS ARE AUTOMATICALLY TRANSFERRED TO THE SUMMARY SHEET.

SIMILAR TO FORM DS-D-0110 (REV. 5/93)

## G Street Bridge (HST)

## STRUCTURE EXCAVATION

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			(SF) EA	TOTAL (CY)		
	LENGTH	WIDTH	THICK				
ENGLISH:1 METRIC:2 = 1							
For piles battered 1:3, use BATTER FACTOR = 1.054							
<b>ABUTMENT</b>							
TYPE =	BRIDGE						
<b>BENTS</b>							
TYPE =	BRIDGE				261.4		
COLUMN 1	16.00	16.00	6.855	1.00	109.68		
COLUMN 2	16.00	16.00	6.887	1.00	110.19		
COLUMN 3	16.00	16.00	6.913	1.00	110.61		
COLUMN 4	16.00	16.00	6.913	1.00	110.61		
<b>RETAINING WALL</b>							
TYPE =	BRIDGE				285.7		
ABUTMENT 1 LEFT							
WW (H=10')	57.68	9.58	2.837	1.00	27.19		
ABUTMENT 1 RIGHT							
WW (H=8')	54.52	9.25	3.376	1.00	31.23		
ABUTMENT 3 LEFT							
WW (H=8')	64.20	9.25	2.753	1.00	25.47		
ABUTMENT 3 RIGHT							
WW (H=8')	50.00	9.25	3.294	1.00	30.47		
WW (H=6')	41.23	9.00	3.466	1.00	31.20		
<b>TOTAL = 547.1</b>							

## G Street Bridge (HST)

## **STRUCTURE BACKFILL**

5/29/2012

## G Street Bridge (HST)

## STRUCTURE BACKFILL

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
New FG (sloped rear) 1	5.00	3.25	4.47	1.00	14.52	2.69
New FG (sloped rear) 2	6.92	3.25	4.59	0.50	14.93	1.91
ABUTMENT 3 LEFT						78.8
WW (H=8')						
Excavation						60.55
Footing	64.20	7.25	1.33	-1.00	9.67	-22.98
Wall	64.20	1.35	1.42	-1.00	1.92	-4.56
Wall (Battered Side)	64.20	0.06	1.42	-0.50	0.08	-0.10
Roadside Backfill	64.20	4.94	4.75	1.00	23.46	55.78
New FG (non sloped)	59.20	3.25	1.59	1.00	5.16	11.32
New FG (sloped rear) 1	5.00	3.25	3.69	1.00	11.98	2.22
New FG (sloped rear) 2	5.71	3.25	3.80	0.50	12.36	1.31
ABUTMENT 3 RIGHT						103.5
WW (H=8')						
Excavation						56.43
Footing	50.00	7.25	1.33	-1.00	9.67	-17.90
Wall	50.00	1.30	1.96	-1.00	2.55	-4.72
Wall (Battered Side)	50.00	0.08	1.96	-0.50	0.16	-0.15
Roadside Backfill	50.00	3.71	4.78	1.00	17.73	32.84
WW (H=6')						66.5
Excavation						47.64
Footing	41.23	7.00	1.33	-1.00	9.33	-14.25
Wall	41.23	1.21	2.13	-1.00	2.59	-3.95
Wall (Battered Side)	41.23	0.09	2.13	-0.50	0.19	-0.14
Roadside Backfill	41.23	1.59	4.57	1.00	7.25	11.08
New FG (sloped rear) 1	5.00	3.25	2.25	1.00	7.31	1.35
New FG (sloped rear) 2	3.57	3.25	2.37	0.50	7.70	0.51
					RETAINING WALL TOTAL	396.5
					TOTAL =	507.8

## G Street Bridge (HST)

## PERVIOUS BACKFILL

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
ENGLISH:1 METRIC:2 = 1						
<b>ABUTMENT</b>						
Wall Drains are assumed to be 3" above FG					ABUTMENT TOTAL	0.0
<b>BENTS</b>						
					BENTS TOTAL	0.0
<b>RETAINING WALL</b>						
At Abutment 1 Left Side						
Return Wall	7.00	6.85	1.00	1.00	6.85	1.78
WW Design H = 10'	57.68	1.83	1.00	1.00	1.83	3.91
At Abutment 1 Right Side						
Return Wall	7.00	3.54	1.00	1.00	3.54	0.92
WW Design H = 8'	54.52	0.72	1.00	1.00	0.72	1.44
At Abutment 3 Left Side						
Return Wall	7.00	1.48	1.00	1.00	1.48	0.38
WW Design H = 8'	64.20	1.67	1.00	1.00	1.67	3.98
At Abutment 3 Right Side						
Return Wall	7.00	1.36	1.00	1.00	1.36	0.35
WW Design H = 8'	50.00	1.96	1.00	1.00	1.96	3.63
WW Design H = 6'	32.37	1.10	1.00	0.00	1.10	
Wall Drains are assumed to be 3" above FG					RETAINING WALL TOTAL	16.4
					TOTAL =	16.4

G Street Bridge (HST)

## MISCELLANEOUS

05/29/12

DESCRIPTION	FROM STATION	TO STATION	DEPTH	WIDTH	LENGTH	Unit Wt.	Pjack	VOLUME CY	AREA SF	LENGTH LF	WEIGHT LBS
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**TEMPORARY RAILING** (TYPE = )

**SUBTOTAL =** **0.0**

**CONCRETE BARRIER** (TYPE = 26 Mod )

APPROACH SLAB / WINGWALL	4	8.000	32.00
RET. WALL			267.63

CONCRETE BARRIER	(TYPE = )	SUBTOTAL =	505.8
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00  
SILVERMAN

BEARING  
11" x 11" x 1 5" - ABILITI  
SUB TOTAL = 60

11" x 11" x 1.5" - ABUT 3

**SUBTOTAL =** **JOINT SEAL** **(MRR =** **12.0** **)**

At Abutments 1 & 3							
	2			70,040			140.08
SUBTOTAL =						140.1	

SUBTOTAL = 0.0

**JOINT SEAL ASSEMBLY**      **(M8)** = **0.0**

**Frame 1 (span 1-2)** 3299.1 3402.2 1 103.100 7500.0 12982.96

**SUBTOTAL =** **12,983.0**

G Street Bridge (HST)

## MISCELLANEOUS

05/29/12



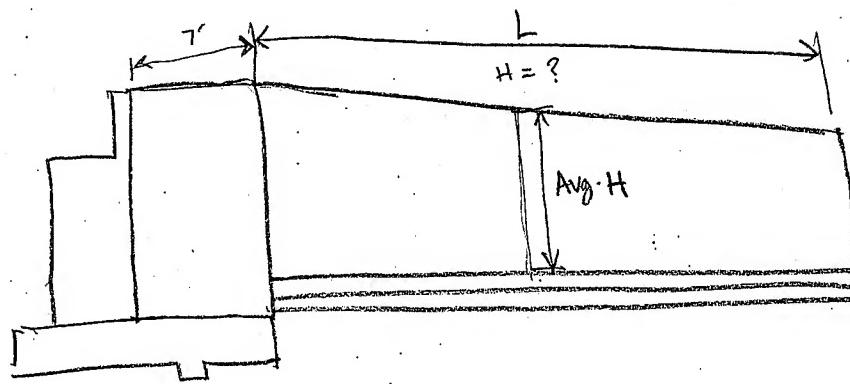
## G Street Bridge (HST)

## ARCHITECTURAL TREATMENT

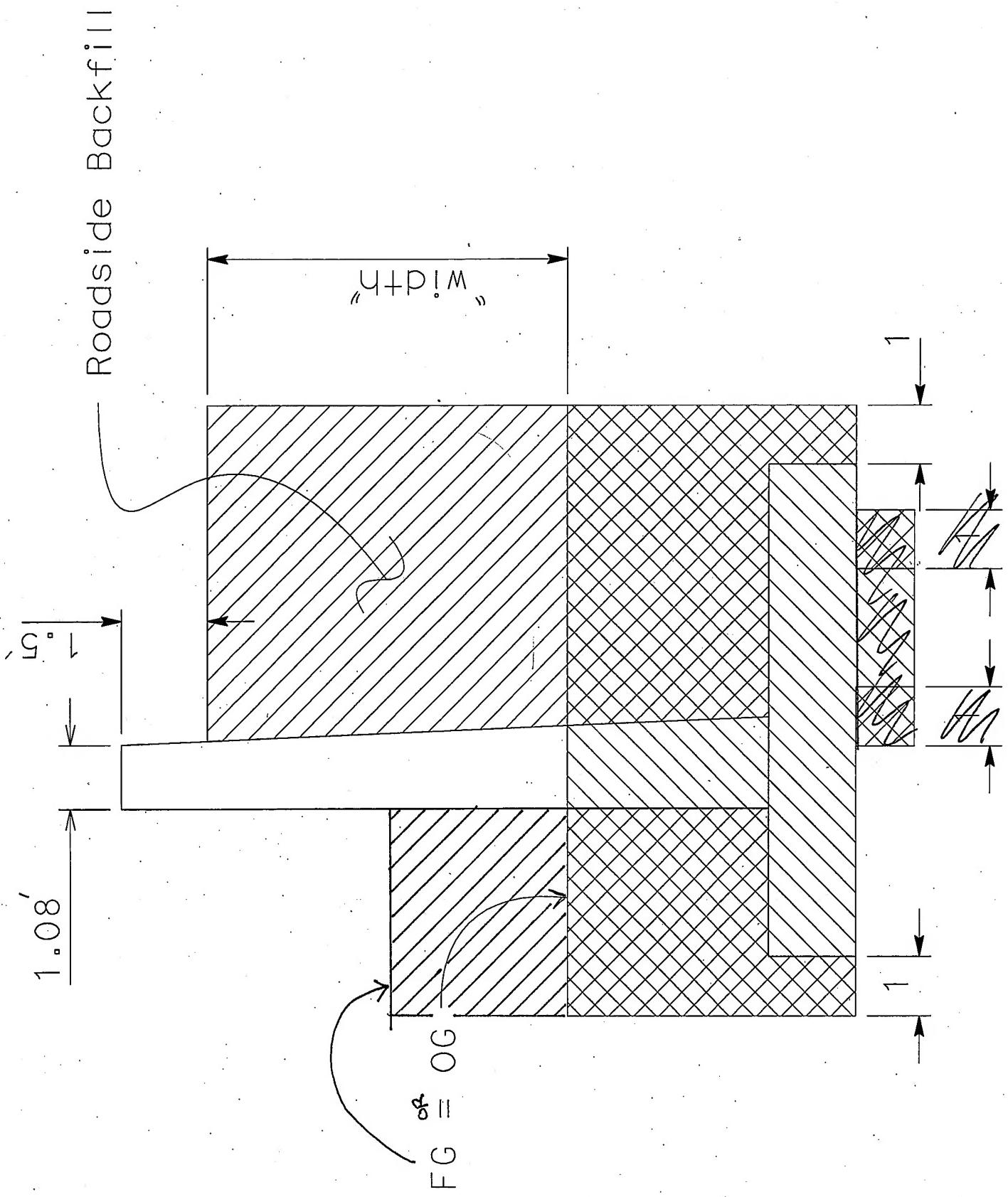
5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)				TOTAL (SF)		
		LENGTH	AVG HEIGHT				
ENGLISH:1 METRIC:2 = 1							
<b>RETAINING WALLS</b>							
<b>ABUT 1 LEFT</b>							
DESIGN H = 10		57.68	6.22		358.87		
				AREA TOTAL	358.9		
<b>ABUT 1 RIGHT</b>							
DESIGN H = 8		54.52	6.26		341.08		
				AREA TOTAL	341.1		
<b>ABUT 3 LEFT</b>							
DESIGN H = 8		64.20	5.98		384.06		
				AREA TOTAL	384.1		
<b>ABUT 3 RIGHT</b>							
DESIGN H = 8		50.00	6.27		313.65		
DESIGN H = 6		41.23	4.27		176.05		
				AREA TOTAL	489.7		
<b>SUB TOTAL AREA</b>							
				SF	1,573.7		
<b>ABUTMENT FACE</b>							
<b>ABUT 1</b>							
FACE AREA		70.07	11.00		770.77		
RETURN WALL		7.00	11.00		77.00		
RETURN WALL		7.00	11.00		77.00		
				AREA TOTAL	924.8		
<b>ABUT 3</b>							
FACE AREA		70.01	11.00		770.11		
RETURN WALL		7.00	11.00		77.00		
RETURN WALL		7.00	11.00		77.00		
				AREA TOTAL	924.1		
<b>SUB TOTAL AREA</b>							
				SF	1,848.9		
<b>TOTAL ARCH TREAT AREA</b>							
				SF	3,422.6		

New Abut RW Dimensions :



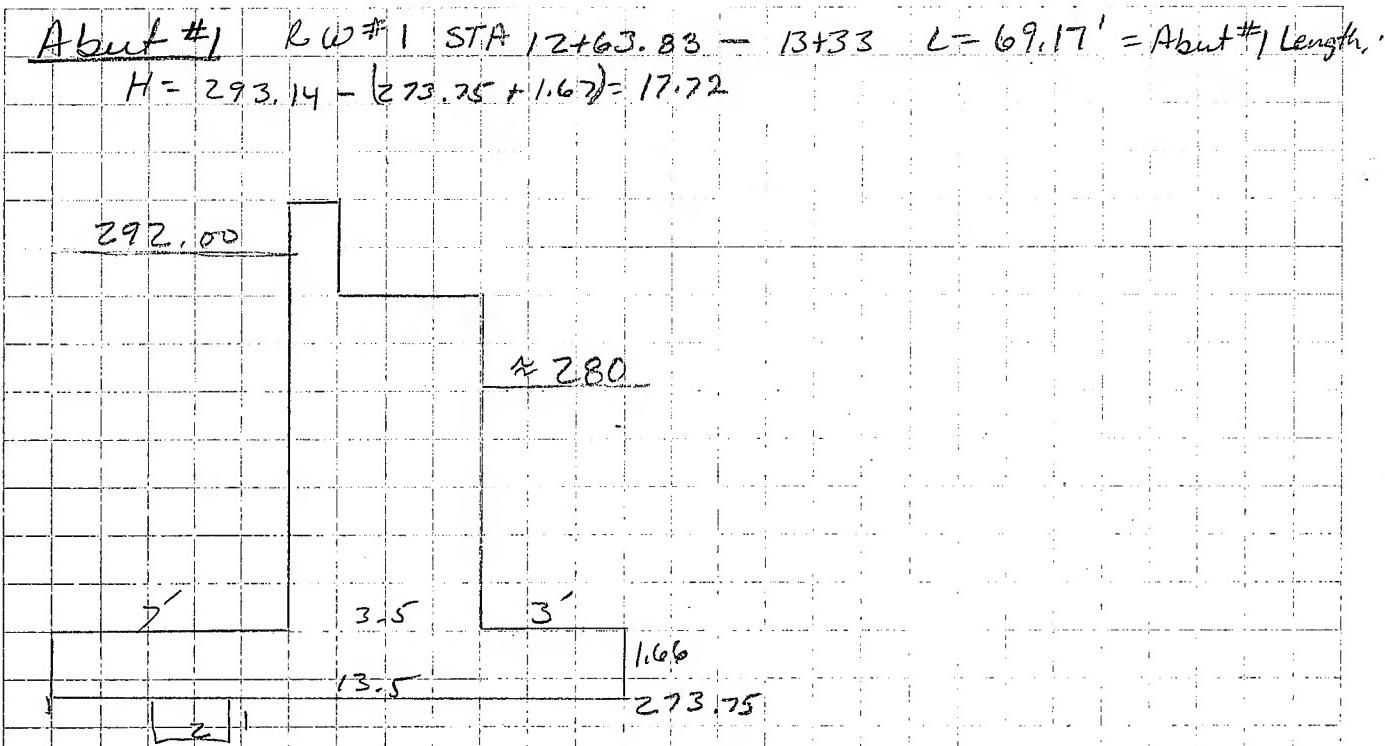
	L	Avg. H	(H=10) ✓	1.083' x = 1.434', l = 8.429'
Abut 1 Left (RW Layout 1)	57.677'	8.422'	(H=8) ✓	x = 1.387', l = 7.305'
Abut 1 Right (RW Layout 2)	54.521'	7.299'	(H=8) ✓	x = 1.411', l = 7.864'
Abut 3 Left (RW Layout 3)	64.198'	7.857'	(H=8) ✓	x = 1.373 <sup>82</sup> , l = 7.179'
Abut 3 Right (RW Layout 4)	41.229'	6.967'	(H=6) ✓	x = 1.301', l = 5.225'
	50'	7.173'		
	5.220'			



DATE 5/2012

DS-D 18 (SLV. J 03)

## Excavation &amp; Backfill



$$\text{Excavation} = (15.5)(18.39)(69.17) = 19716.56 \text{ ft}^3 = 730.24 \text{ cu yd} > 735.36 \text{ cu yd}$$

$$(2)(1)(69.17) = 138.34 \text{ ft}^3 = 5.12 \text{ cu yd}$$

$$\text{Backfill} = (2)(1)(1.66)(69.17) = 229.64$$

$$= 8(16.59)(69.17) = 9180.24$$

$$= 4(4.59)(69.17) = 1289.96$$

$$\frac{10742.84 \text{ ft}^3}{10} = 397.88 \text{ cu yd}$$

GRG

G Street OC

2

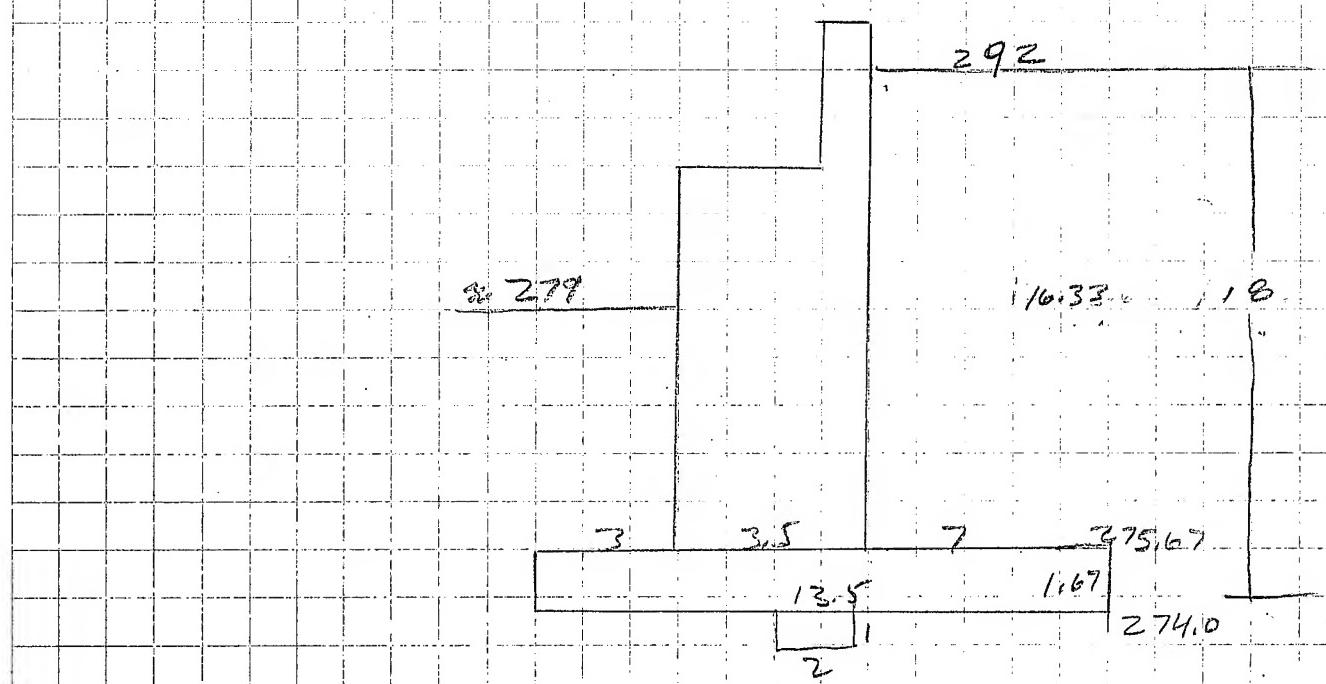
2

DATE 5/20/12

DS D 13 (REV 3/03)

Excavation &amp; Backfill

Ambit #3 RW #2 STA 12+06 - 13+07.23 L = 71.23  
 $292 - 274 = 18$



Excavation:  $(15.5)(18)(71.23) = 19373.17 - 736.04 \text{ cu yd} \Rightarrow 17613.1 \text{ cu yd.}$   
 $(2)(1)(71.23) = 142.46 = 5.27 \text{ cu yd.}$

Backfill

$$(2)(1)(1.67)(71.23) = 237.90$$

$$(2)(3.33)(71.23) = 711.58$$

$$(8)(16.33)(71.23) = 9305.48$$

$$110254.86 = 379.81 \text{ cu yd.}$$

GRG

06-24T201

DATE 5/20/22 G Street DC RW's

0640 TO 0645, 2022

About 1 Retaining Wall Architectural treatment,  
Prepar STAIN  
 $253.23 + 250.16 = 503.39 \text{ ft}^2$

About 3

$$324.70 + 251.19 = 575.89 \text{ ft}^2$$

$$\underline{\underline{575.89 \text{ ft}^2}}$$

$$\underline{\underline{1079.28 \text{ ft}^2}}$$

GRG

06-2HT201

5/2012 G STREET DC

DRAFT REV. 1.00

TEN/T Architectural treatment Prepare Stain

$$\left[ 2.5'(2)(4.42') + 2'(4)(4.42') \right] 4 \text{ col} = \\ [21.1 + 35.36] 4 = 229.84 \text{ ft}^2$$